Mityvac MV8000 O-ring Replacement

A vacuum pump must be air tight in order to operate. A leak in your vacuum pump will potentially complicate the diagnosis of vacuum systems or make bleeding automotive fluids more difficult. Learn to replace old o-rings to return original function.

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INTRODUCTION

When testing air-tight systems like vacuum lines on an vehicle, you need an air-tight pump. Not to mention, a leaking pump makes pumping automotive fluids much more difficult.

With time, the o-ring seals in your pump will flatten, stiffen, and lose their lubrication. This may cause them to leak allowing air back in to the pump.

The leaking vacuum can lead to confusion when trying to diagnose vacuum systems.

Learn to take apart your hand pump and replace the o-rings.

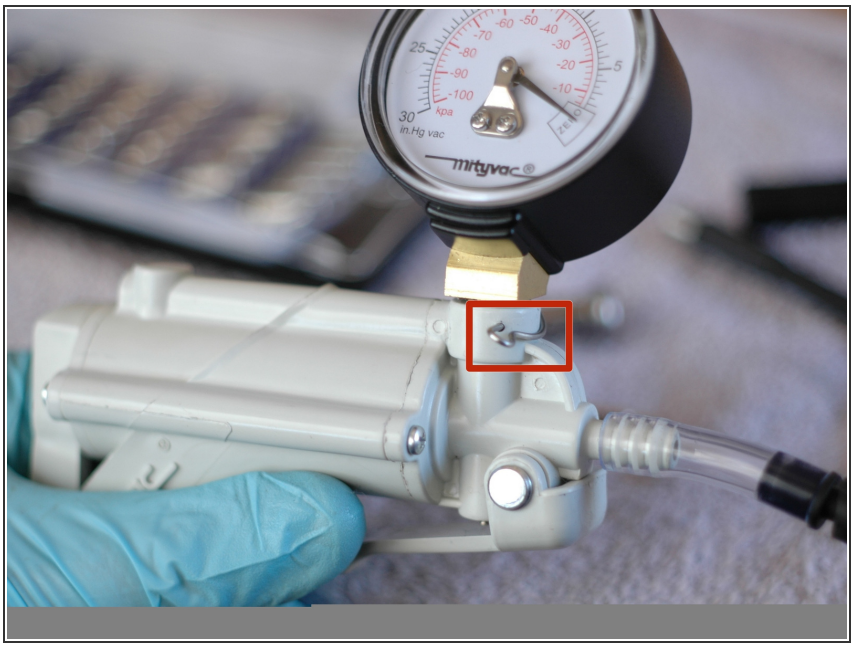
TOOLS:

- Phillips #0 Screwdriver (1)
- Flathead Screwdriver (1)
- Dielectric Grease (1)

PARTS:

- Metric O-Ring Set (1)

Step 1 — O-ring Seals

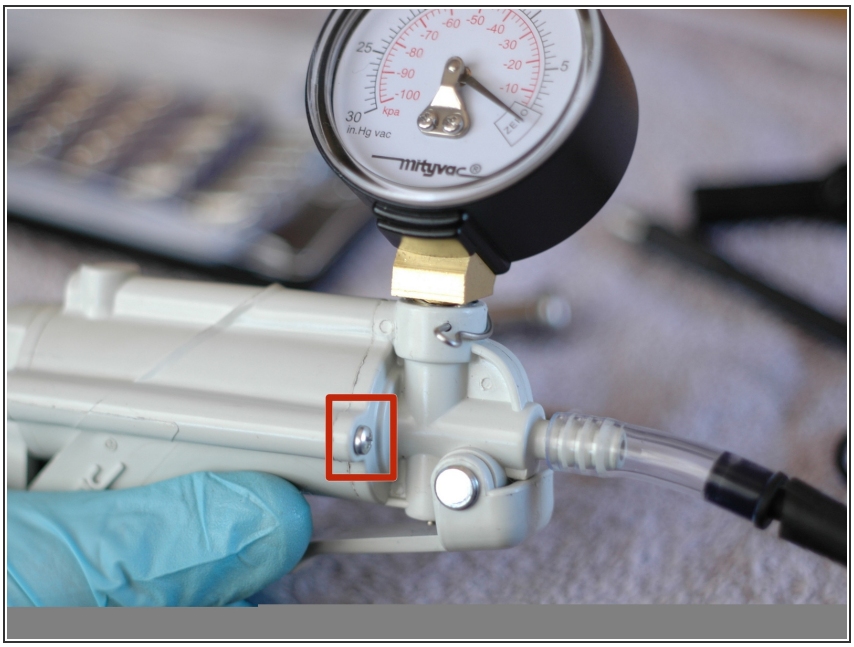


- Remove the silver cotter pin that holds the gauge to the body of the pump.
- With the cotter pin removed, simply pull the gauge straight up and away from the body; it does NOT screw in but instead is a friction fit. The cotter pin is what prevents it from coming out. Be sure not to lose the small wave washer between the gauge and the body.

Step 2

- With the gauge removed from the body you can now carefully use a flat blade screw driver, or a small hook, to remove the black o-ring from the brass stem on the gauge.
- Match the size of this o-ring with one from your kit. Likely, the new o-ring will have a slightly thicker "section" or thickness but should have the same inner diameter. In this application the best choice was a 2mm section, 4.4mm inner diamater o-ring.
- Rub a small amount of synthetic, preferably silicone based grease on the o-ring.
- Set aside the gauge until reassembly.

Step 3

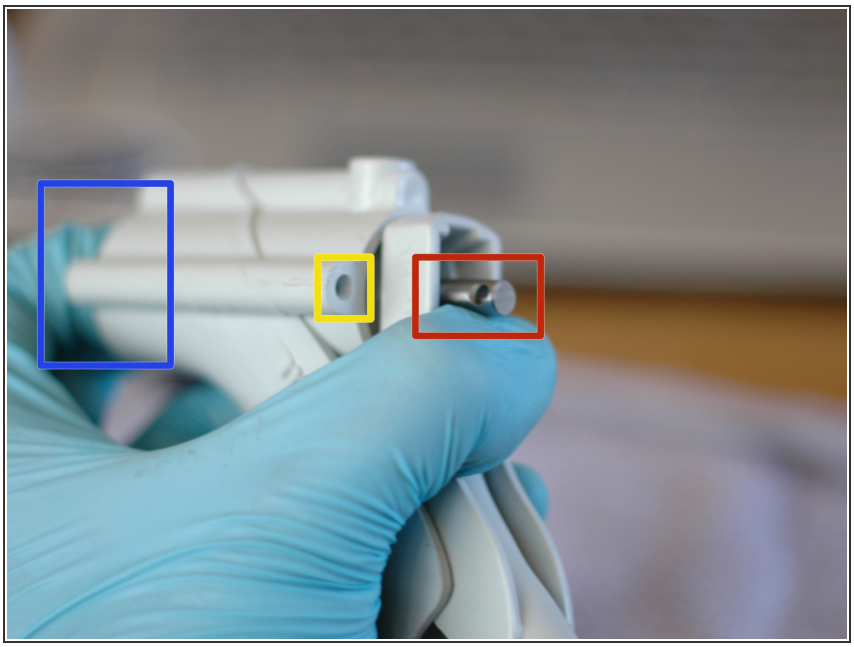


- Remove the two screws on the front of the pump body. A #0 screw driver works well. The front cover of the pump can then be gently pulled forward away from the pump body.

Step 4

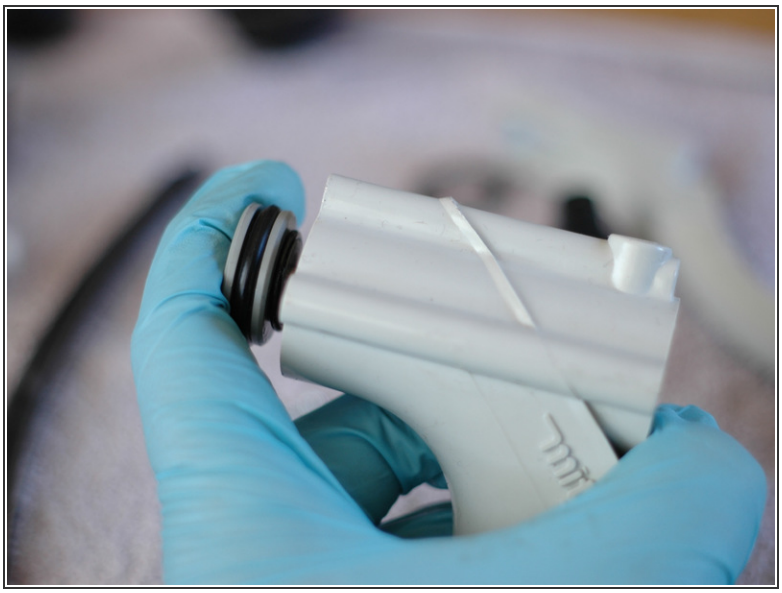
- With the front cover removed you can pull off the o-ring with your screw driver and find an appropriate replacement in your kit.
- Grease the o-ring with synthetic grease and set aside for re-assembly.

Step 5



- At this point, with the front cover removed, the final component is the rear portion of the pump. This contains the pump piston, which is round and visible on the opposite side of the handle.
- Remove the two #0 screws holding the rear cover on over the back of the pump; it's between the rear of the pump and the handle.
- Use your fore-finger to push in on the piston; the spring inside is fairly strong, get a helpful second set of hands if necessary.
- The piston must be pushed far enough back to expose the shaft past the handle. Once the shaft is fully exposed, the retaining pin will slip out (not pictured). The pin goes in to the whole pictured.
- With the shaft retaining pin removed, the piston will now push out of the rear body of the pump due to the spring tension.

Step 6



- Once the piston is protruding from the body, you are ready to replace this final o-ring. You can choose to leave the piston in the body, or remove it, the shaft, and the spring. The choice is yours.
- Pictured here is the pump completely disassembled, with the piston removed, for reference.
- Remove the o-ring on the piston like you did the others. Find a suitable replacement.
- Lubricate both the o-ring and the inside of the piston cylinder with a light coating of synthetic grease.

Step 7

- For reference, you can see a comparison here. The original MityVac o-ring is on top, the new o-ring is below. The new o-ring is slightly thicker and, as long as it fits in the body of the pump without binding, it should provide a better and longer lasting seal.

Reassembly of the device is the opposite of dis-assembly.

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